Part III

LAC 33:VII.523.A. Part III: Additional Supplementary Information

The following supplementary information is required for all solid waste processing and disposal facilities. All responses and exhibits must be identified in the following sequence to facilitate the evaluation:

A. a discussion demonstrating that the potential and real adverse environmental effects of the facility have been avoided to the maximum extent possible;

RESPONSE

Two Rivers Recycling, LLC's permit application is for the disposal of *only* Type III wastes: including such materials as hurricane-related debris, construction and demolition debris, wood wastes and yard wastes. In context of Two Rivers' objective of servicing hurricane debris removal, debris accepted at Two Rivers' facility may contain limited amounts of lead found in older paints and other compounds identified by the USEPA. Asbestos associated with older homes may be present in relatively small amounts. Included in this Type III application is Two Rivers' Operations Plan outlining an appropriate protocol for misting of such debris during loading and unloading. Two Rivers will employ additional steps to control and monitor groundwater for the presence of these soluable materials as described in Two Rivers' groundwater sampling program. It should be noted that all other staging areas, disposal facilities and contractors who handle hurricane-related debris also face the same issues. Two Rivers' facility resolves the potential problem of adverse environmental effects by significantly exceeding the standards required by LDEQ for a Type III facility, as described elsewhere in this permit application.

Based on USACE's demolition protocol, Two Rivers understands that the first line of defense will be to eliminate the source of the contamination. Specifically, Two Rivers understands that potentially hazardous household materials will be removed prior to demolition. In context, asbestos materials, if identified during demolition, may be separated and bagged pursuant to LDEQ rules and regulations. If for any reason this protocol is not observed by demolition contractors, Two Rivers will take the appropriate action as barges are loaded and unloaded and during each stage of materials handling including the misting of debris.

The second line of defense against potential environmental impact is the significant, naturally occurring deposits of Mississippi River sediments found at Two Rivers' site. These clayey soils are extremely impervious and underlie Two Rivers' entire site at depths ranging from 20 to 100 feet or more.

As a third line of defense against any potential environmental impact, Two Rivers' facility design includes constructing an above ground facility enabling all water to gravity drain to a water collection system without the need to construct sumps and create potential sites of liner failure. This is accomplished by elevating the clay liner system 15-20 feet *above* grade at the center of each cell. The elevation of each cell decreases uniformly from the center point to the perimeter by maintaining a 1% slope. This feature also minimizes hydrostatic head pressure needed to force water through the liner system and underlying clay deposits thus creating one of the safest Type III facilities in the state. The design also insures the fast drainage of leachate from the facility.

Two Rivers' fourth and fifth lines of defense against potential environmental impact are a comprehensive groundwater monitoring system and a redundant levee system. With respect to groundwater monitoring, Two Rivers' system exceeds LDEQ's standards for a Type III facility. With respect to Two Rivers' levee systems, each cell will be protected by an existing levee which surrounds the larger farm in which Two Rivers' site is located. A second levee will be constructed around each cell at a height two feet above the 100-year flood stage.

Finally, Two Rivers anticipates using clayey cover soils if asbestos is found during the course of daily operations. With respect to potential airborne contaminants, Two Rivers does not plan on operating any open air burning of debris. Also, Two Rivers understands that, based on LDEQ standards, Type III materials are not conducive to the formation of gases.

Potential Adverse Effects. In context of Two Rivers' barge-based operating plan, the only unusual component associated with Two Rivers' materials may be the fumigant which will be used to treat materials originating in areas infested with formosan termites. Two Rivers understands its fumigation protocol, which leverages existing fumigation practices and which was developed in conjunction with the Louisiana Department of Agriculture and Forestry (LDAF) and the LSU Agricultural Center will kill all termites without causing potential harm to human health. All traces of the fumigant should be fully dissipated before debris reaches Two Rivers' facility. Any residual amounts will be verified prior to receipt at the facility.

Transport Media. The potential pathways for migration of materials from the facility are, in order of decreasing velocity: air, surface water and groundwater. Air quality impacts are thought to be inconsequential due to the nature of the wastes received. Windblown waste will be minimized by the character of the debris and the use of litter fences and normal housekeeping practices. Two Rivers' site is so remote and large that all windblown debris should be easily spotted and collected before it can leave the facility. As a Type III facility, populations of vectors such as birds, rodents and insects should be minimal. While mosquitoes are common throughout Louisiana, the population size will be controlled through grading and the elimination of standing water.

Potential contamination of surface and ground waters is also considered inconsequential due to the unique elevated design of Two Rivers' facility and the substantial quantity of underlying clay soils at Two Rivers' site. To insure the quality of groundwater, a ground water monitoring system will be installed as described in the full application permit. In the same way, Two

Rivers' underlying clay soils will significantly reduce potential surface and ground water contamination from detention ponds.

Receptors. The remote location of Two Rivers' facility, combined with the naturally occurring clays, its unique design, safe operations, and ground and surface water management plans, render impacts to human health improbable. Two Rivers believes that no other Type III facility in Louisiana can achieve a comparable level of protection from potential impacts to human health or the environment. Because Two River's site is currently an actively managed farm, there are no jurisdictional wetlands (see report by Wildlife Technical Services, Inc. in Appendix A of this application).

Real Adverse Effects. Two Rivers knows of no real adverse effects which reasonably could be associated with the proposed facility. A small portion of the ongoing private farming operations will be replaced with a Type III disposal facility which has been specifically designed to manage hurricane-related debris in the safest way possible. Two Rivers' facility should create sustainable employment opportunities and significant host fees which will meaningfully benefit the local community.

Measures to Protect the Environment.
Please note that the numerous measures employed by Two Rivers to protect the environment significantly exceed LDEQ standards. Specifically, the design of Two Rivers' disposal cells largely eliminates the risk of any potential migration of water into the groundwater. Two Rivers believes this is the only Type III facility in Louisiana which will employ such advanced protective measures. Two Rivers also believes these safety measures are needed to safely accept and dispose of hurricane-related debris. Two Rivers' facility is specifically designed to address the hurricane-related disposal needs of Louisiana *and* to protect the environment.

1. Two Rivers' design eliminates hydrostatic pressure needed to force water through a liner system by constructing the disposal cells above grade. Two Rivers' foundation of the three-foot clay liner is raised to a height of 15-20 feet above grade. Two Rivers' cells are designed to drain from the center to the outside edge by maintaining a 1% gradient, naturally draining water and minimizing debris contact time.
2. Two Rivers' facility is ideally located due to the underlying highly impervious clayey soils ranging from 50 to 100 feet in thickness.
3. At least three feet of re-compacted clay with permeability not more than 10^{-7} cm per second will be added on top of the elevated foundation of each disposal cell.
4. Stormwater flowing from the center to the outside of each cell will be conveyed to an engineered detention pond. The detention pond is one component of Two Rivers' water management system. Water from the detention pond will be discharged under an LPDES discharge permit.
5. Two Rivers' comprehensive water management plan includes routine sampling of groundwater monitoring wells strategically located to detect any changes of water flow/quality to all potential down gradient locations.
6. The design of Two Rivers' groundwater monitoring plan and the location of each cell are based upon a comprehensive hydrogeological investigation.

7. Two Rivers' entire facility is protected by a redundant system of levees. The first levee is constructed to prevent a 100-year flood event from inundating the larger farm in which Two Rivers' site is located. A second levee will be constructed around the perimeter of each cell at least two feet above the 100-year storm level.

Other Measures. All the protective measures identified above far exceed LDEQ design requirements for a Type III facility to protect the environment. Two Rivers knows of no other protective measures that would make a material difference to the safety of its facility which have not been incorporated into the design of Two Rivers' disposal cells or which has not already been addressed by Two Rivers' Operations Plan, Safety Plan or Groundwater Sampling Plan (all of which are contained herein).

LAC 33:VII.523.B.

B. a cost-benefit analysis demonstrating that the social and economic benefits of the facility outweigh the environmental-impact costs;

RESPONSE

Costs. With respect to social and economic costs, Two Rivers believes there will be little to no adverse social or economic costs associated with its proposed facility. Specifically, given its remote location and comprehensive water management system, there will be no incremental utilization of water/sewer or road infrastructure. Two Rivers' facility will require power to support its operations. However, Two Rivers' anticipates its power use will be provided under commercial contract similar to any other commercial facility.

Any potential environmental impact associated with Two Rivers' proposed facility are minimal due to site selection criteria and an engineering design and operating plan which significantly exceed LDEQ's Type III facility standards. The location of Two Rivers' facility is ideal as it contains all of the conditions needed to construct and operate an optimally secure disposal facility.

The advantages of this site include thick deposits of clay (from 50 to 100 feet or more in thickness), depth to groundwater and distance to population centers. Marksville, LA is located approximately 12 miles from the site while Jonesville, LA is approximately 18 miles distant. Furthermore, Two Rivers' proposed site is unique in that it will allow barge transportation from multiple navigable waterways including the Red River, Black River, Atchafalaya River and the Mississippi River. Importantly, the USACE maintains these waterways to a standard depth of approximately 11 feet. Also, Two Rivers' site is accessible by two publicly maintained roads in Catahoula Parish. In context, Two Rivers' location meets LDEQ's operating requirement for accessibility and multiple navigable routes. Equally significant is the avoidance of any impact on wetlands, endangered or threatened species or cultural or archeological sites.

Consequently, Two Rivers' site is ideal for its intended use and may be the only known location in Louisiana that meets or exceeds all of the requirements of LDEQ to permit and operate a Type III solid waste facility. Two Rivers' site also meets the first objective of USACE in its "debris mission", which is to remove hurricane-related debris as quickly and safely as possible. In context, Two Rivers' use of barges could double the rate of hurricane-related debris removal.

Two Rivers' design minimizes hydrostatic head pressure within the cell, by increasing the elevation in the middle of the cell to 15-20 feet above grade (elevation +62) with the elevation decreasing to the natural elevation at the edges. These final elevations will include three feet of highly impervious, re-compacted clay with permeability of no more than $10x1^{-7}$ cm per second. A gradient of 1% from the center of each cell allows water to drain naturally to the edges where it will be collected and conveyed to a detention pond for discharge under an LPDES permit. In context, Two Rivers' comprehensive water management plan readily exceeds the requirement of a Type III facility.

1. Two Rivers' water management system is based upon a comprehensive hydrogeological study.
2. Two Rivers' groundwater monitoring system will detect any changes of flow patterns and water quality inside the property.
3. Two Rivers' monitoring wells will be placed on the top of the levees constructed at the edge of each cell, protecting the wells from the unlikely event that the outside levee is breached.

Two Rivers' site is the best suited for its intended use due to the site's geological and hydrogeological conditions and the remoteness of the proposed facility. At least 12 miles separate the site from population centers such as Marksville, LA (12 miles) and Jonesville, LA (18 miles), with only small pockets of residents existing within a three-mile range. Many of these residents live within the larger farm property (known locally as the Delta Farm).

Benefits. With respect to potential benefits of the proposed facility, Two Rivers believes there will be substantial benefit to the State of Louisiana, communities affected by Hurricane Katrina and Hurricane Rita and the local community of Catahoula Parish.

Specifically, Two Rivers will service areas affected by recent hurricanes by removing and permanently disposing of debris. Two Rivers' facility will help preserve much needed capacity of disposal facilities in these communities. Importantly, Two Rivers' operations should substantially expedite the rate of debris removal from hurricane affected areas and advance the demolition and reconstruction process. Finally, Two Rivers' facility will provide sustainable employment opportunities and meaningful host fees to the local community in Catahoula Parish.

The social and economic benefits of Two Rivers' project are well known to residents of Catahoula Parish and elected local and statewide officials. Beyond host fees and increased tax revenues, Two Rivers hopes to provide capital to the local community which may be used to help improve Parish Road 3102 connecting Marksville, LA to Jonesville, LA. In context of these and other local community benefits, Catahoula's Police Jury has sent three letters in support of Two Rivers' facility. The most recent letter, dated January 13, 2006, states, "*The Catahoula Parish Police Jury whole heartedly endorses the location of the plant in Catahoula Parish and will assist in any possible way to that end*".

With respect to employment, Two Rivers is committed to retaining and hiring the maximum number of our neighbors as possible, and have already done so in confirming site conditions, surveying the property, determining any wetland or wildlife concerns and engineering an environmentally safe facility. Two Rivers plans to hire personnel to operate its facility and barge terminals and to provide training as needed.

With respect to hurricane-related debris disposal, Two Rivers' facility will significantly benefit areas ravaged by Hurricane Katrina and Hurricane Rita. Two Rivers will employ a significant barge fleet to transport as much hurricane-related debris as may be required by USACE, FEMA and LDEQ. Two Rivers' facility and barge terminals are designed to unload at least 24 barges in a 24-hour period. Each barge represents an equivalent capacity of approximately 70 truckloads of debris. In context, Two Rivers' facility should be able to process the equivalent of

approximately 1,600 trucks per day.

Transporting debris by barge minimizes the considerable damage heavy truck traffic may cause to roads and bridges, increases fuel efficiency, reduces air contaminants found in diesel fuel and reduces traffic on publicly-maintained roads and state highways otherwise congested with trucks.

Two Rivers' added capacity potentially eliminates the need for the open burning of debris. It also minimizes potential long-term CERCLA-related exposure by offering an alternative to unlined landfills or other less optimal facilities.

Analysis. Two Rivers' facility offers substantial social and economic benefits to the State of Louisiana, Catahoula Parish and areas damaged by Hurricane Katrina and Hurricane Rita.

It is noteworthy that Catahoula Parish revenues will increase substantially as soon as operations begin to meet current budget challenges without incurring the cost of providing utilities, maintaining roads or providing other services. In context, Two Rivers hopes to provide funds which may be used to help improve local roads which will benefit both Catahoula and Avoyelles Parishes. The potential benefit to the local economy of Two Rivers' facility is equally positive given Two Rivers' need for operating employees and ongoing professional support.

Significant state expenditures to repair roads and highways should be alleviated as quickly as the transition from truck-based debris removal to barge-based debris removal can be put into effect. Two Rivers' facility will help preserve much needed disposal capacity in areas affected by hurricanes which will be necessary for reconstruction and for future "normal course" consumption. Equally important, Two Rivers' facility should reduce the potentially negative impact of using unlined or other less optimal facilities and the potential need for open burning of debris.

Consequently, Two Rivers believes the social and economic benefits associated with its facility far outweigh any potential environmental impact.

LAC 33:VII.523.C.

C. a discussion and description of possible alternative projects which would offer more protection to the environment without unduly curtailing non-environmental benefits;

RESPONSE

Two Rivers understands that, with input from the appropriate local and state authorities, USACE has been tasked with executing and managing all hurricane-related debris removal and disposal. Federal, state and local agencies responsible for debris removal and reconstruction are acutely aware of the need to increase the velocity of debris removal. USACE, FEMA and others have identified a number of options to dispose of hurricane-related debris including truck, rail and barge based methods.

Two Rivers understands that current debris disposal options do not have sufficient remaining capacity to service both immediate hurricane-related needs and the future needs of reconstruction and normal course operations. In any event, Two Rivers does not believe these facilities can expedite the rate of debris removal due to the limitations presented by their need to receive materials by truck or to handle materials repeatedly if delivered by another mode of transportation (i.e., rail or barge). As hurricane affected areas begin reconstruction in earnest, Two Rivers anticipates that expediting debris removal will become a critically important issue.

As a result, Two Rivers' ability to remove debris by barge has become a welcome alternative among various federal and state authorities due to Two Rivers' ability to significantly increase the velocity at which debris can be removed.

Two Rivers believes its proposed site is the only location suited for the proposed facility due to the size of the property, the geological and hydrogeological conditions of the site and the multiple routes of water and land access of the site. In addition, Two Rivers' facility is specifically designed to eliminate any threat to human health or the environment as detailed in the full permit application, including Part III, which responds to LDEQ's "IT Questions". Two Rivers also believes that no other Type III facility in the State of Louisiana is designed to process up to 100,000 cubic yards daily using barges to transport debris. Two Rivers' dock facilities have been permitted by the USACE, Vicksburg office.

In short, Two Rivers believes there is no better solution or site for a Type III facility which can provide the level of environmental protection, infrastructure and facilities to accept some 100,000 cubic yards a day of debris disposal. Two Rivers' speed of debris removal can only be accomplished through the use of barges. In context, Two Rivers' site will be the only facility in Louisiana with the ability to offload debris from barge directly into a LDEQ permitted solid waste facility.

LAC 33:VII.523.D.

D. a discussion of possible alternative facilities which would offer more protection to the environment without unduly curtailing nonenvironmental benefits

RESPONSE

Two Rivers' knows of no alternative facilities offering more protection to the environment without unduly curtailing non-environmental benefits. Two Rivers' site selection was based upon a number of criteria:

1) The ability to transport large quantities of debris by barge;
2) The most remote location possible;
3) A site that is protected from future hurricanes;
4) A site that protected from 100-year flood events;
5) A site with minimal to no impact to wetlands;
6) A site with minimal to no impact to cultural or archeological resources;
7) A site which poses minimal to no threat to endangered or threatened species;
8) The occurrence of appropriate soil conditions (i.e., thick deposits of clay without sand seams connecting to any aquifer system stem;
9) A site that provides the maximum potential buffer;
10) The ability to construct barge terminals without interfering with navigable channels or disrupting the ongoing movement of river traffic;
11) A site located in an area of low population density;
12) A site with minimal to no impact to the view from any residential areas
13) A site with minimal or no impact to adjacent land use
14) A site accessible to emergency medical services;
15) The support of the local Parish Police Jury hosting the facility;
16) The support of other elected officials; and
17) The support of the USACE and FEMA debris mission.

Two Rivers' site was selected because it met all of the foregoing site selection criteria. Two Rivers knows of no other site in the State of Louisiana that meets these requirements and is available for the intended use. Two Rivers evaluated a number of other potential locations (as detailed below), but found the proposed site to be superior to the alternatives.

In context, Two Rivers' proposed site is the only location which combines geological suitability, remoteness from populated areas, multiple routes of accessibility and sufficient river frontage to construct multiple barge terminals able to offload 100,000 cubic yards of materials per day. Also, Two Rivers' facility can be serviced by multiple emergency responders including fire protection, emergency physicians and a choice of local hospitals. Agreements are in place with organizations providing these services.

Alternate Sites Considered

Alternate Site I: "The Rock Pile"

- Size: Approximately 40 acres
- Location: Catahoula Parish
- Public road access: Yes, site borders Highway 124
- Navigable river access: Yes, along the Black River
- Barge terminal: Yes, but not sufficient for intended operations
- Reasons for rejection: Site not large enough, terminal not sufficient, water monitoring and management prospects not sufficient

Alternate Site II: "Plug Road"

- Size: Approximately 600 acres
- Location: Catahoula Parish
- Public road access: Yes, site borders publicly maintained "Parish Road"
- Navigable river access: No
- Barge terminal: No
- Reasons for rejection: Site not large enough, sub-optimal shape, limited access to public roads, no access to a navigable river

Alternate Site III: "Ice Cream Land"

- Size: Approximately 1,000 acres
- Location: Catahoula Parish
- Public road access: Yes, site borders publicly maintained "Vick Road"
- Navigable river access: Yes, site borders Red River above Lock #2
- Barge terminal: No
- Reasons for rejection: Site not large enough, must pass through a second lock to access the site, very productive as farmland, limited access to public roads

Alternate Site IV: "Avoyelles Property"

- Size: Approximately 15,000 acres
- Location: Avoyelles Parish
- Public road access: Yes, site borders publicly maintained "Vick Road"
- Navigable river access: No
- Barge terminal: No
- Reasons for rejection: Site too large, not located on a navigable river, limited access to public roads

Selected Site

- Size: Approximately 3,000-5,000 acres
- Location: Catahoula Parish
- Public road access: Yes, site located at the intersection of the publicly maintained "Vick Road" and "Parish Road"
- Navigable river access: Yes, site borders 3+ miles along Red River
- Reasons for acceptance: Site is appropriate size, conveniently shaped, immediately adjacent to a navigable river, multiple access to public roads, superb soil conditions, superb water monitoring and management prospects

Environmental Costs and Benefits. These were discussed in the response to LAC 33:VII.523.D. Two Rivers' mitigants include a highly impervious re-compacted clay liner elevated at 15-20 feet above ground, stormwater collection and detention and groundwater monitoring. In context, Two Rivers' proposed design far exceeds LDEQ's requirements for a Type III facility.

Environmentally Sensitive Areas. There is only one environmentally sensitive area within a mile of the site, and it lies across the Red River from the proposed site. The Red River forms a physical and hydrological barrier between the facility and the environmentally sensitive area.

Groundwater Protection. Two Rivers' design includes a highly impervious clay liner elevated at 15-20 feet above grade with a slope of 1% to the outer edge of the cells, contact stormwater collection and groundwater monitoring which are not required by LDEQ for a Type III disposal facility. These extraordinary measures are used to protect ground and surface water to the greatest practical extent. Two Rivers believes its facility design readily demonstrates its commitment to siting and operating the safest solid waste facility possible.

Air Quality Protection. Based on this Type III application, Two Rivers' facility will not accept putrescible wastes. Consequently, air quality is not an issue. The site is very remote, lying 2 miles or more from the nearest habitation and 12 to 18 miles from Marksville, LA and Jonesville, LA. No open burning will occur at the facility. Compared against emissions created by transporting equivalent volumes of debris by truck, the volume of air emissions related to Two Rivers' facility is significantly lower due to Two Rivers' barge-based mode of transporting debris to the facility.

Surface Water Quality. Although not required for a Type III facility, Two Rivers' facility design includes collection and management of contact stormwater. All such water is collected, held and released only under the conditions of an LPDES permit.

Hurricanes. Two Rivers' site is located over 100 miles inland from the coast and is levee-protected to an elevation +62 feet NGVD. While hurricanes could impact Two Rivers' site, the effects of such storms would be negligible compared with their effects on any Type III facility located closer to the Gulf of Mexico or any such facility not protected by the redundant levee systems which characterize Two Rivers' site.

Existing Land Use. As described in response to LAC 33:VII.521.A.1.c, Two Rivers' site is currently employed as farmland. The area surrounding Two Rivers' location also is predominately farmland. Property for Two Rivers' facility will be contributed by one or more landowners who support Two Rivers' intended use (as indicated in the enclosed letter of Authority to Occupy). With respect to local law, Two Rivers' site is not zoned. With respect to local support, the Catahoula Parish Police Jury readily supports the project. Two Rivers' facility will be separated from the surrounding area by the expansive farm operations. The site will be protected by a redundant levee system which will exceed the standard of a 100-year flood event. All contact stormwater will be managed through an LPDES permit. Groundwater will be monitored via a system of strategically placed wells. These factors, plus the remoteness of the site, ensure minimal to no effect on the enjoyment and use of the surrounding property.

Aesthetics. Due to the area's very low population and the property's current use as farmland, land adjoining the Two Rivers' site is not noted for its aesthetic beauty or use. Two Rivers' site can be accessed by land on one or more publicly-maintained roads. All such points of access will be controlled. Due to its remoteness there is minimal recreational use of the Red River. In any event, Two Rivers' levee system should shield the disposal area from a river view. As mentioned in response to LAC 33.VII.521.A.1.e, Two Rivers' location has no historical or cultural sites.

Health Risks. Since Two Rivers' site is a Type III facility, any risk to human health should be minimal. Such risks will be further mitigated by the significant steps Two Rivers plans to protect human health and the environment (many of which are not required of a Type III facility). Two Rivers also will routinely sample groundwater as defined in the Sampling and Analysis Plan. The LPDES discharge also will be sampled and analyzed in accordance with an LPDES permit.

Proximity to Schools, Hospitals, or Residential Areas. The nearest small rural school is located 2 miles or more from Two Rivers' facility, as is the nearest residence. The nearest hospital is approximately 15 miles away.

Nuisances. Based on this application, Two Rivers' facility will accept only Type III wastes which are relatively odor and vector free. During maximum operations, the site may be lighted at night. However, Two Rivers' remote location should make neither light nor operational noise a nuisance to neighboring inhabitants.

Site Analysis. Two Rivers' site is exceptionally suitable for a Type III facility due to its geology, hydrogeology, remote location, low population density, proximity to multiple routes of access, . ideal geological and hydrogeological conditions, minimal/non-existent cultural, archeological, wetland or wildlife concerns and decades of use as a farm. Potential impacts to other natural resources are limited because of ongoing farming practices. No environmental impact should result from offsite mining of clay or cover soils as Two Rivers' site is entirely self-supporting and requires no offsite borrow soil.

The cultural resources of the site are well studied. Various Native American cultural resources in the area have been documented under an LSU sponsored program and lie outside of Two Rivers' project area. The entire farmland is either uplands or "prior converted" farmland. As a result, no jurisdictional wetlands will be impacted by Two Rivers' proposed activities. In addition, the remoteness of Two Rivers' site exceeds that of other Type III facilities in Louisiana.

Based on its barge-based mode of materials transport and USACE barge terminal permit, Two Rivers' facility should be able to accept 100,000 cubic yards of materials per day. In context, Two Rivers could substantially expedite the rate of debris removal from areas affected by Hurricane Katrina and Hurricane Rita. Two Rivers is unaware of any other facility capable of directly receiving debris by barge or so substantially expediting the rate of such debris removal.

Management of the farm is extremely committed to responsible land stewardship. Within the past 2 years farm management has set aside more than 5,000 acres as conservation areas for native species and migrating waterfowl.

The economic benefits of the project are substantial and will significantly increase the revenues of Catahoula Parish. Two Rivers' operations will create numerous sustainable jobs for area residents. Two Rivers will seek to provide funding which may be used to improve local roads and infrastructure. Given these benefits, the Catahoula Parish Police Jury avidly supports Two Rivers proposed facility.

LAC 33:VII.523.E.

E. A discussion and description of the mitigating measures which would offer more protection to the environment than the facility, as proposed, without unduly curtailing nonenvironmental benefits.

RESPONSE

Control of Wastes and Pollutants. Two Rivers' facility design includes substantial mitigation measures to control wastes and/or pollutants. The first control is the type of waste allowed. Only Type III wastes will be accepted. These are recognized in the LDEQ regulations as comparatively innocuous. They also are relatively free from gas or odor. The second set of controls includes naturally occurring site conditions, discussed in response to LAC 33:VII.521.A.1.c. Wastes and pollutants will be further controlled through facility design and a comprehensive water management system.

Two Rivers' design includes a highly impervious clay liner and groundwater monitoring system to control the potential escape of any constituents via groundwater and to collect contact stormwater for discharge under an LPDES permit. Other mitigating measures could include a synthetic liner and a full water treatment system. However, these features (excluding a drainage plan) are not required of a Type III facility and would add substantially to the costs of developing and operating a Type III facility.

The combined costs of a) constructing Two Rivers' cells above grade; b) forfeiting revenue related to Two Rivers' elevated clay liner system; c) installing Two Rivers' highly impervious clay liner system (10^{-7} cm per second); and d) instituting Two Rivers' water management plan are designed to protect the environment and already substantially reduce the non-environmental benefits of Two Rivers' proposed facility. It is important to note that none of these measures is required of a Type III facility.

In context, Two Rivers believes any further protective measures would reduce the non-environmental benefits of the proposed facility to a degree not commensurate with any additional improvement in environmental protection.

Quality Assurance Controls. All environmental construction (liner, levees, final cover, etc.) will be performed under a Construction Quality Assurance Plan (See Appendix F). Any potential of a release to groundwater is quite remote due to the unique design of Two Rivers' facility and will be further protected by Two Rivers' ground and surface water management plans. Any potential transport via surface water will be controlled by the contact stormwater management system, which will discharge water under the conditions of an LPDES permit.

Features to Decrease Environmental or Health Effects. Two Rivers' facility incorporates numerous environmental and health protection features beyond those required for a Type III disposal facility. These design features, plus the safeguards against accepting non-permitted wastes, provide far more protection than is normally required of a Type III facility. While one could always "do more", Two Rivers believes it would not be possible to do more at the proposed facility without unduly curtailing the non-environmental benefits of the proposed facility.